

Abstract

5 A method and a device to grow from the vapor phase, a single crystal of either SiC, a group III-nitride, or alloys thereof, at a growth rate and for a period of time sufficient to produce a crystal of preferably several centimeters length. The diameter of the growing crystal may be controlled. To prevent the formation of undesirable polycrystalline deposits on surfaces in the downstream vicinity of the single crystal growth area, the local supersaturation of at least one component of the material grown is lowered by introducing a separate gas flow comprising at least one halogen element or a combination of said halogen and hydrogen species.